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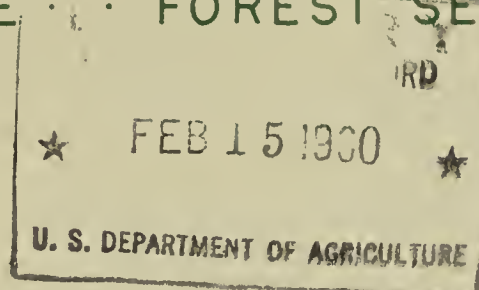
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TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE · FOREST SERVICE

No. 574



1959 Forest Tree Seed Crop Generally Poor in the Lake States

Forest tree seed production in general was about equal to that in 1958 and was poorer than in any year since 1949 for the 14-year period of record, according to observations made at field centers of the Lake States Forest Experiment Station (see table on reverse side). Nevertheless some species produced bumper crops in northeastern Wisconsin and good crops in other localities. Seed crops of most tree species varied by localities from failure to fair or good. Compared to 1958 general seed production was better in northern Minnesota and North Dakota, about the same in northeastern Wisconsin, and poorer in Michigan.

In northern Minnesota good crops were reported for some localities for black spruce, northern white-cedar, tamarack, paper birch, and quaking aspen. Seed crop failures occurred in one or more localities in balsam fir, black ash, bur oak, and northern red oak.

Bumper crops were produced in northeastern Wisconsin by eastern white pine, basswood, yellow birch, and white ash. Good crops were reported for black spruce, balsam fir, quaking aspen, bigtooth aspen, and American elm. Only tamarack had a crop failure, although several other species had poor crops.

Only red maple and yellow birch had good seed crops in central Upper Michigan. The seed crop was a failure for eastern white pine, white spruce, black spruce, balsam fir, American beech, American elm, and black ash. Other species had poor to fair crops.

Northern white-cedar was the only species with a good seed crop in Lower Michigan. No other species had better than a poor seed crop there.

In north-central North Dakota boxelder, green ash, bur oak, and chokecherry produced good seed crops. Seed crops failed for American elm, Siberian elm, hackberry, and Russian-olive. They were poor for other species.

Most seed collectors are interested chiefly in the pines. Except for white pine in northeastern Wisconsin, therefore, they will consider 1959 a poor seed year in the Lake States. It also promises to be a bad year in northern Minnesota and Lower Michigan for wildlife species that depend on mast. Conditions appear only fair in northeastern Wisconsin and Upper Michigan.

January 1960

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Table 1.--Forest tree seed crops in the Lake States, 1959

Species	Estimated percentage of a full crop ^{1/} in --				
	Northern Minnesota	Northeastern Wisconsin	Central Upper Michigan	Lower Peninsula Michigan	North-central North Dakota
Red pine	25-50	25	25	7	<u>2/-</u>
Eastern white pine	25	95	7	7	-
Jack pine	25-50	25	50	25	-
Ponderosa pine	-	-	-	-	25
White spruce	25-50	25	7	25	-
Black spruce	50-75	75	7	7	-
Norway spruce	-	25	-	-	-
Balsam fir	7-25	75	7	7	-
Eastern hemlock	-	50	25	-	-
Northern white-cedar	50-75	25	50	75	-
Tamarack	25-75	7	-	7	-
Sugar maple	25-50	25	25	7	-
Red maple	-	-	75	7	-
Boxelder	-	-	-	-	75
American beech	-	-	7	7	-
Basswood	-	95	50	-	-
Yellow birch	-	95	75	-	-
Paper birch	25-75	50	-	25	-
Quaking aspen	25-75	75	-	25	-
Bigtooth aspen	-	75	-	25	-
Balsam poplar	-	-	-	-	-
American elm	-	75	7	25	7
Siberian elm	-	-	-	-	7
Hackberry	-	-	-	-	7
White ash	-	95	-	-	-
Green ash	-	-	-	-	75
Black ash	7	25	7	-	-
Bur oak	7-25	-	-	-	75
Northern pin oak	-	-	-	7	-
Black oak	-	-	-	7	-
Northern red oak	7-25	25	50	7	-
White oak	-	50	-	7	-
Chokecherry	-	-	-	-	75
American plum	-	-	-	-	25
Russian-olive	-	-	-	-	7
Caragana	-	-	-	-	25

^{1/} Percentage of a full crop classified as 0-15, failure; 16-35, poor; 36-60, fair; 61-90, good; and 91-100, bumper.

^{2/} A dash (-) signifies no report on this species.